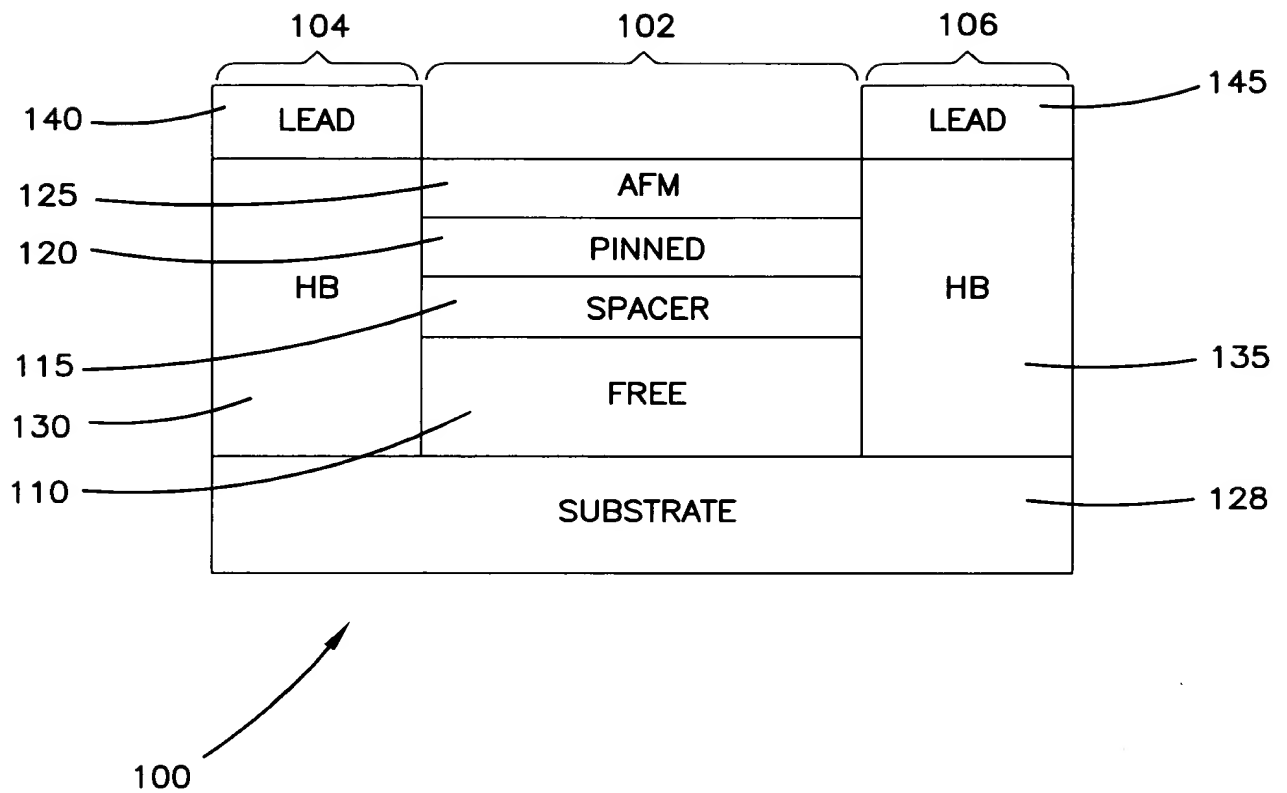


FIG. 1



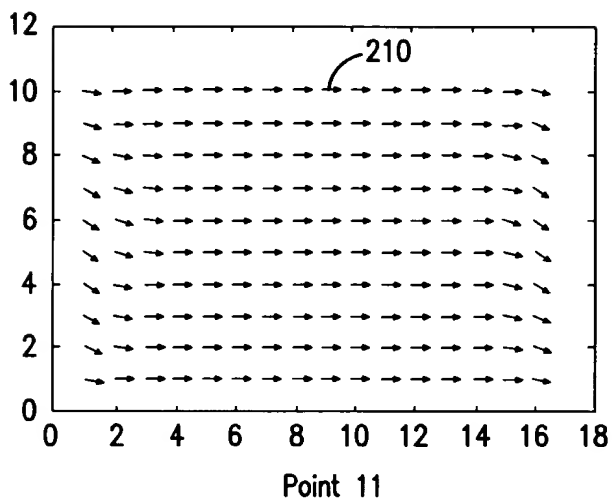


FIG. 2a

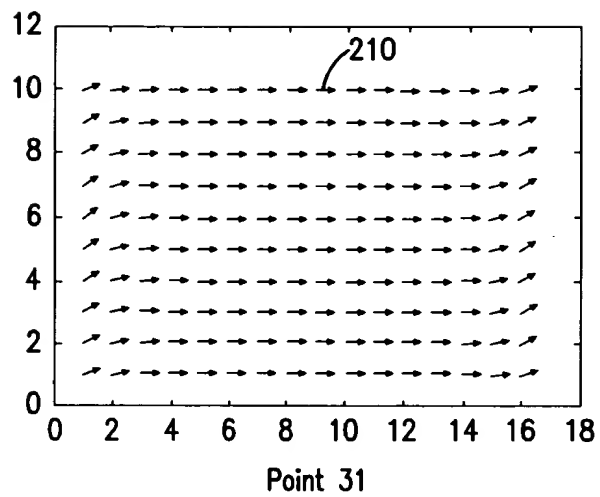
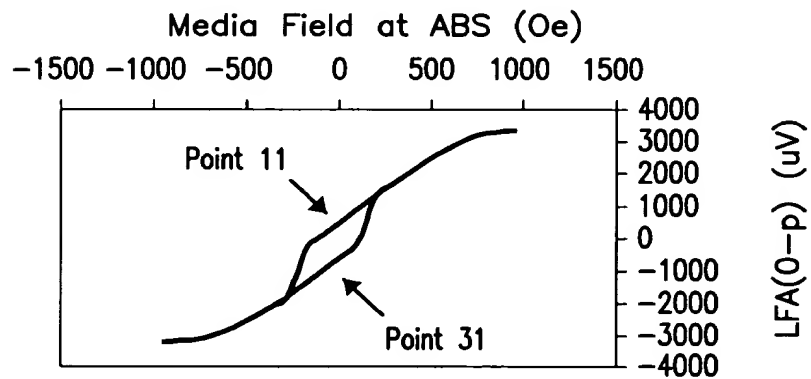


FIG. 2b

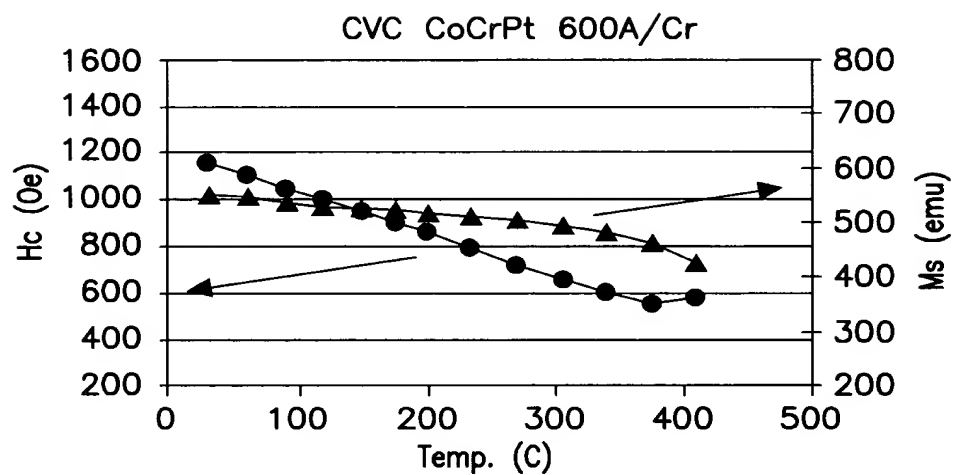
$W=0.62 \text{ } \mu\text{m}$, $H=0.4 \text{ } \mu\text{m}$, $I_b=6 \text{ mA}$
 $SC=1.5$, $R_{\text{sheet}} = 13.5 \text{ Ohm}$



Micromagnetic calculation of the free layer magnetics with different free layer edge states due to the poor PM stabilization.

FIG. 2c

FIG. 3



Temperature dependence of a typical PM hard bias layer

FIG. 4

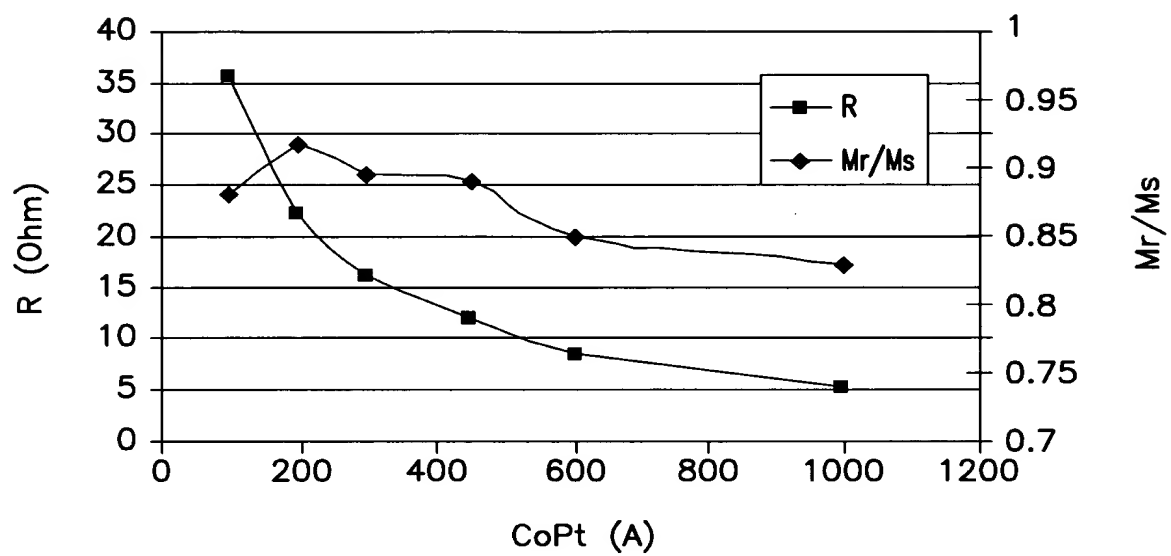


FIG. 5

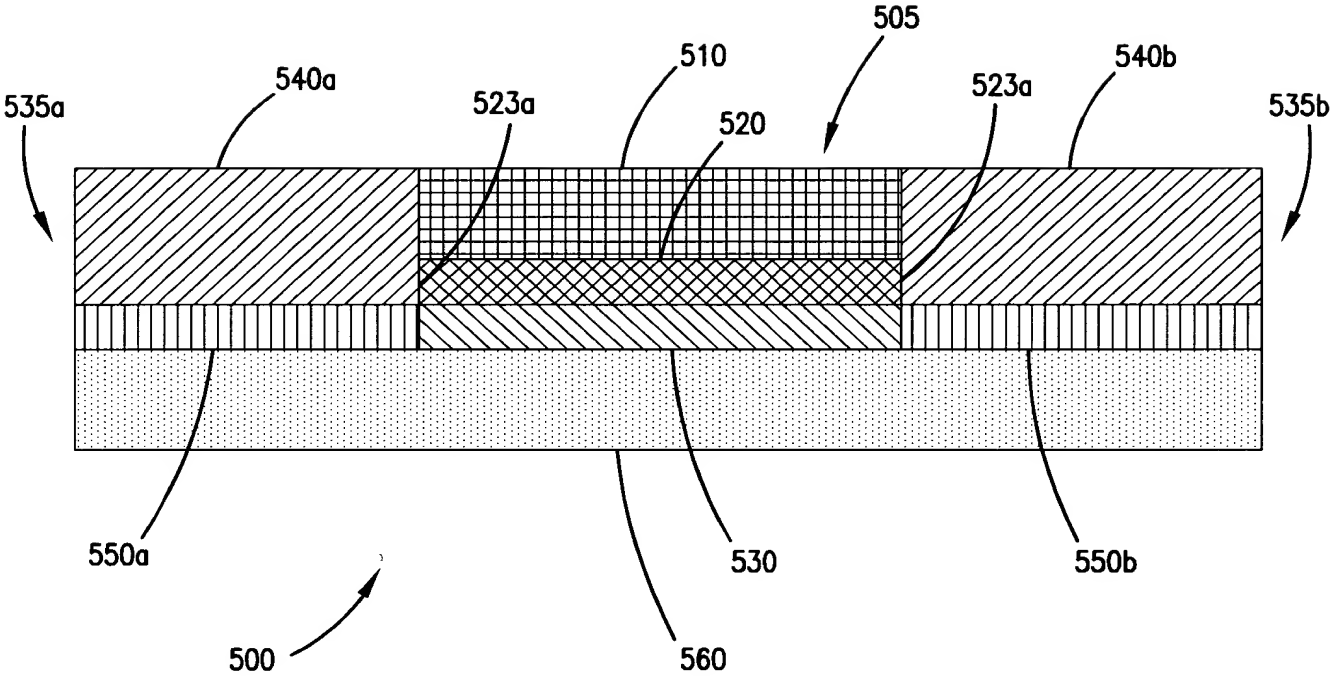


FIG. 6

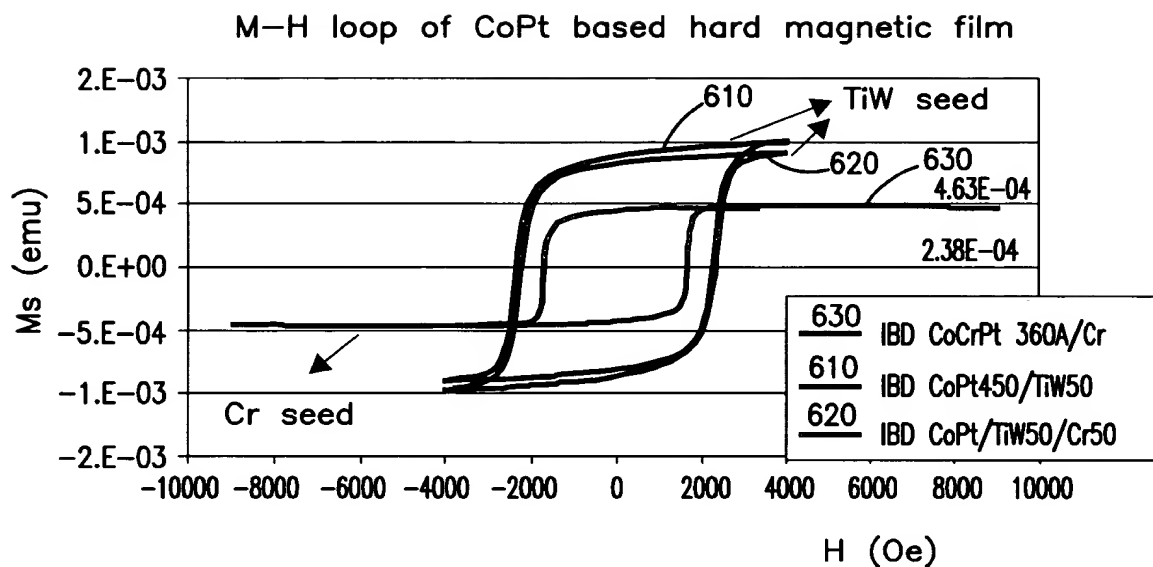


FIG. 7

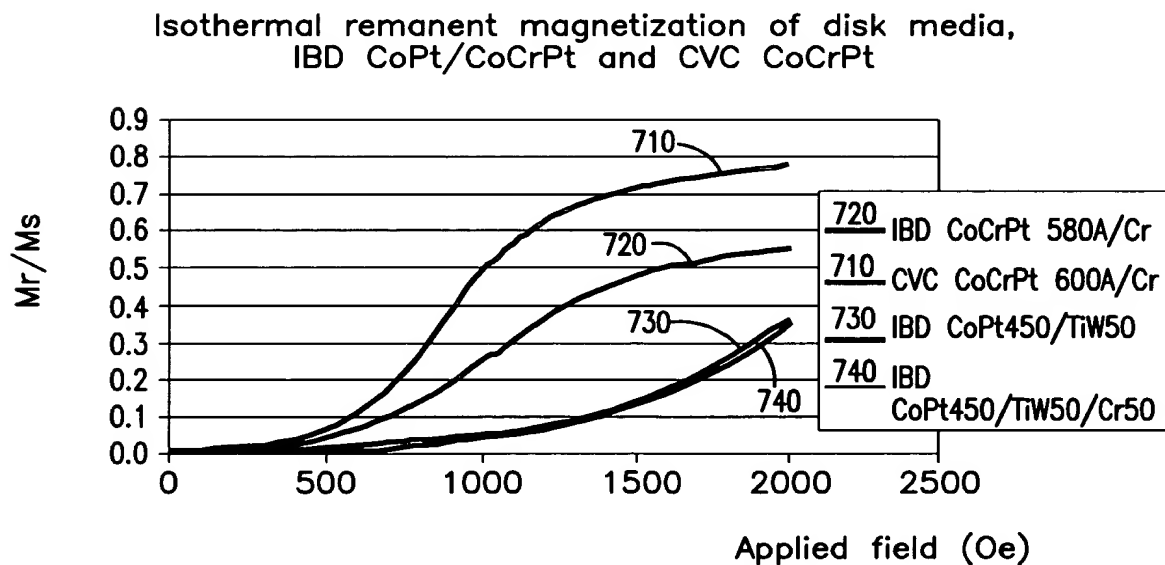


FIG. 8

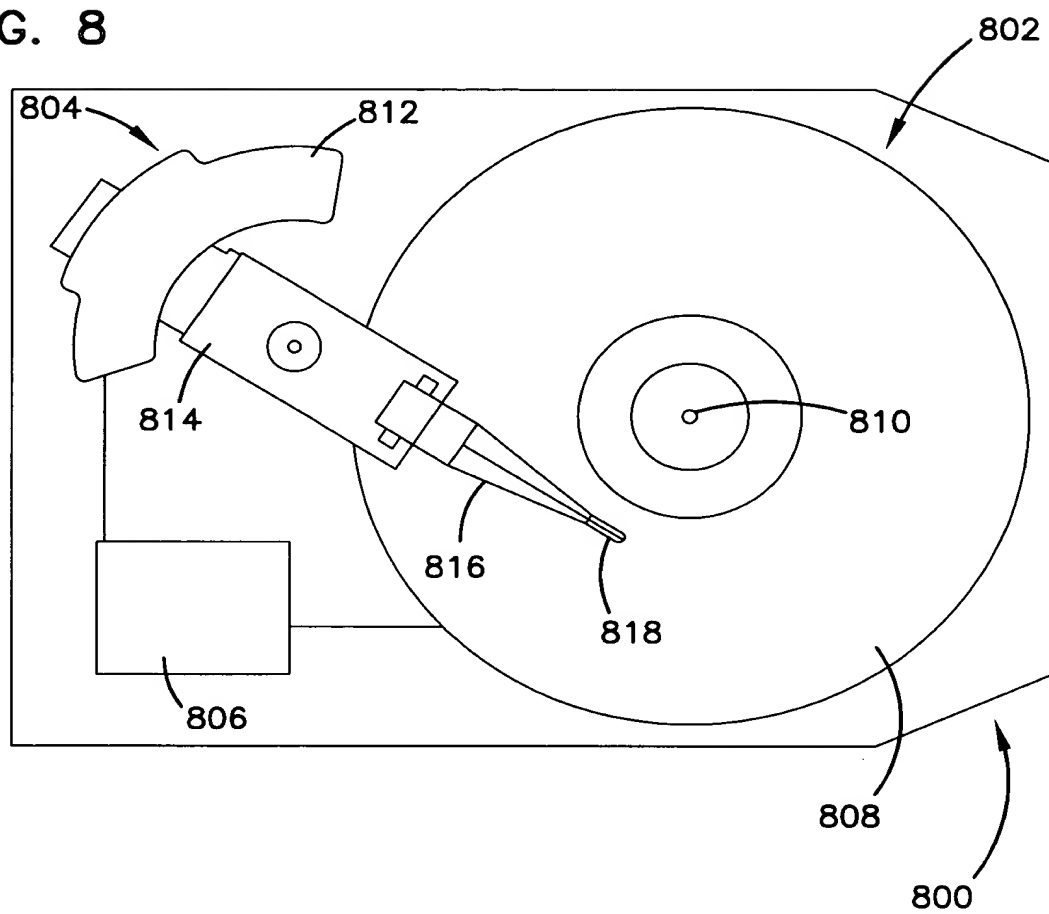


FIG. 9

